STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

MEMORANDUM

TO: Board of Environmental Protection

FROM: Jeffrey S. Crawford, Bureau of Air Quality

DATE: August 20, 2009

RE: Adoption- Proposed Amendments to the Chapter 100 Definitions Regulation

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Statutory and Regulatory Reference:

A. Statutory authority.

38 MRSA Section 585-A provides that the Board of Environmental Protection "may establish and amend regulations to implement ambient air quality standards and emission standards. These regulations shall be designed to achieve and maintain ambient air quality standards and emission standards within any region and prevent air pollution."

B. Specific legal mandates requiring adoption.

No specific legal mandates require the adoption of this rule.

Location/Applicability:

The proposed amendments will apply in all areas of the state.

Description:

The Department is proposing to amend the definition of volatile organic compound (VOC) to exclude three compounds that were recently "delisted" by the U.S. Environmental Protection Agency (EPA) because they are only negligibly reactive, meaning that they contribute little or nothing to the formation of ozone. These compounds include: 1,1,1,2,2,3,4,5,5,5,-decaflouro-3-methoxy-4-trflouromethyl-pentane (known as HFE-7300, or L-14787, or $C_2F_5CF(OCH_3)CF(CF_3)_2$); dimethyl carbonate; and propylene carbonate.

HFE-7300 is used as a heat transfer fluid and for other heat transfer applications. It may also be used as an alternative to chloroflourocarbons (CFCs), perflourocarbons, hydroflourocarbons, and perflourpolyethers, which are being phased out of production due to

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their ability to deplete stratospheric ozone. This change could benefit businesses by making it easier to use HFE-7300 in place of substances that deplete the earth's protective ozone layer and substances with high global warming potentials.

Propylene carbonate is a clear liquid with a low vapor pressure and low evaporation rate compared to many other commonly used organic solvents. It has been used in cosmetics, as an adhesive component in food packaging, as a solvent for plasticizers and synthetic fibers and polymers, and as a solvent for aerial pesticide application.

Dimethyl carbonate is used primarily as a solvent in paints and coatings, and as a methylation and carbonylation agent in organic synthesis.

The Department posted the proposed SIP submittal to a 30-day public comment period with the opportunity to request a public hearing, and received comments in support of the proposed amendments from EPA and the National Paint and Coatings Association. There were no requests for a public hearing.

Environmental Issues:

Volatile organic compounds contribute to ground-level ozone formation or smog which aggravates respiratory ailments such as asthma, bronchitis, and emphysema. The presence of ozone impedes the breathing of even healthy people.

Volatile organic compounds are those compounds of carbon 9excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) which form ozone through atmospheric photochemical reactions. Compounds of carbon (also known as organic compounds) have different levels of reactivity- that is they do not react at the same speed or do not form ozone to the same extent. It has been EPA's policy that organic compounds with a negligible level of reactivity do not need to be regulated to reduce ozone.

Departmental Recommendation:

The Department recommends that the Board adopt the proposed amendments as submitted.

Estimated Time of Presentation:

10 minutes.